

Amendments to the Specification:

Please replace the paragraph beginning on page 7, line 15 with the following rewritten paragraph:

FIG. 2 is a flowchart showing an overview of the whole process S20 for determining the outer profile for a blade to be repaired. As shown in FIG. 2, layers of an undamaged template blade (preferably unused) and undamaged layers of a used turbine blade are scanned (steps S21 and S23, respectively). The scanned layers of the template should include those layers corresponding to the damaged area of the used blade and the undamaged layers immediately below the damaged area. Neutral lines are calculated for scanned layers of the template turbine blade and the used turbine blade (steps [[S6]] S22 and S24, respectively). Using these calculated neutral lines, new neutral lines, for layers in the damaged area of the used turbine blade are generated (step S26). The damaged area of the used turbine blade may not even exist as it has been broken off or cut from the undamaged area, but this is a virtual area, being an area that is to be rebuilt. In this embodiment, correspondence of layers is defined and referenced against the agreed reference point 9, based on corresponding layers being the same distance in the z direction above the agreed reference point 9. The surface profile of the damaged section of the used turbine blade is then determined, as described below, by an extrapolation (step S28) using data on the used turbine blade.

Please replace the paragraph beginning on page 16, line 22 with the following rewritten paragraph:

More particularly, a first set of offsets is determined between the first and second portions of the template (between layers T70 and T72) (step S98), a second set of offsets is determined within the first portion of the template (between layers T68 and T70) (step S100) and a third set of offsets is determined within the first portion of the workpiece (between layers U68 and U70) (step S102). The first, second and third sets of offsets are used to determine the target, fourth set

Appln No. 10/715,877

Amdt date March 18, 2008

Reply to Office action of November 21, 2008

of offsets (step S104). This fourth set of offsets is used with data on the first portion of the used workpiece to extrapolate shape data for the second portion of the used workpiece (~~step S106~~), leading to determination of the surface shape data for the second portion of the used workpiece (~~step S106~~).